

*Upstate Wedding Dietitian*

**W O R K B O O K**

# Understanding Your Metabolic Rate 101

This ultimate workbook is designed for women to teach you about macronutrients, empower you to make healthy balanced decisions, and ditch the fad diets.

*Written by*

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# Introduction

In this workbook, you will understand BMR and be able to estimate your approximate calorie needs per day.

Please know that this workbook is designed for generally healthy female adults and should not replace advice from your physician.

Through education, I hope to empower women to ditch the diet and truly **fuel** their bodies to feel their best.

Warm regards,

*Danielle M. Mann*

# What is BMR?

**BMR stands for basal metabolic rate. This is the rate of energy expenditure (aka calorie burn) while at rest.**

BMR shows us how much energy (calories) we would need to sustain life while doing absolutely nothing.

It's often a skewed misconception, especially among women that we need to "burn off" our calories or earn fuel. This couldn't be further from true. At rest, our organs still need a substantial amount of energy to function.

This is the calculation for women:  
$$\text{BMR} = 447.593 + (9.247 \times \text{weight in kg}) + (3.098 \times \text{height in cm}) - (4.330 \times \text{age in years})$$

If you're not into using old fashioned formulas, thankfully it's 2022 and there are many online calculators available ([calculator.net/BMR](https://calculator.net/BMR)).

It's important to note that BMR takes up about 70% of our total energy expenditure. Physical activity makes up about 20%, and thermogenesis of food (calories burned eating/digesting) takes up about 10%. This varies from person to person.



# BMR Continued...

**There are many factors that can impact a person's BMR.**

One of the biggest factors is muscle mass. The higher amount of muscle mass in a body, the higher the BMR (more calories they burn in a day). This is why men genetically have higher BMRs (calorie needs).

Therefore, resistance training is imperative when looking to increase calorie burn.

Other factors include age, genetics, weather (cold weather increases BMR i.e. shivering), pregnancy, supplements (i.e. caffeine increases BMR in the short term), and diet.

Diet can impact BMR in positive and negative ways. It's known that small, routine meals can increase BMR. However, dieting and significantly restricting your food intake can reduce BMR by up to a whopping 30%. This is why we see people drop weight fast initially on a diet, and quickly gain it all back afterwards. Sometimes they gain even more weight than initially lost... why?

By restricting intake and as a result lowering BMR, it messes with our metabolic set point. Therefore our metabolism decreases and it's suddenly even harder to lose weight. Our BMR used to be let's say 1500 calories, and now it has adapted to needing only 1300 calories per day.

# Determining Energy Needs

## CALCULATING TOTAL CALORIES

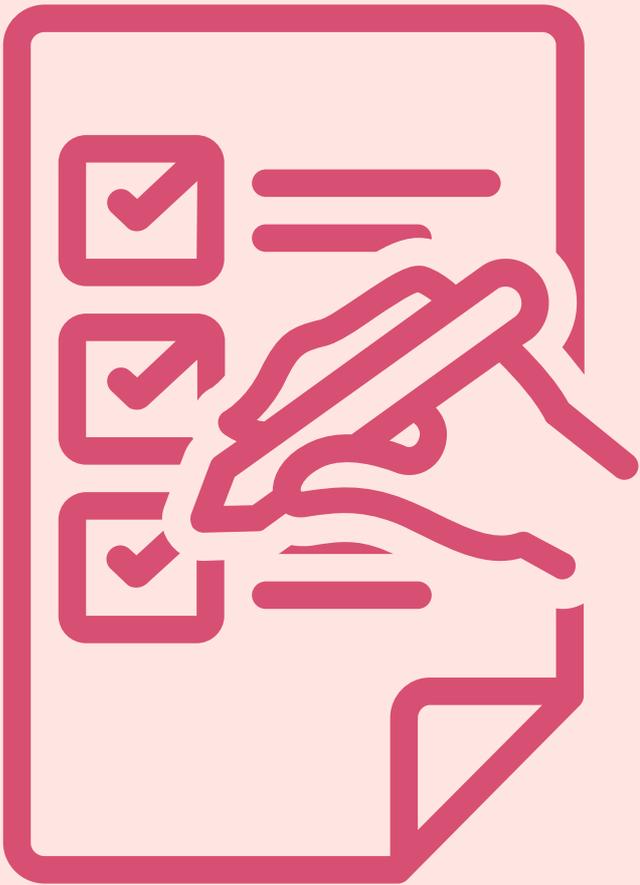
1. Determine BMR (using formula or online calculator).
2. Multiple this number by an activity factor (chart below).

Level of intensity	Type of activity	Activity Factor
Very light	Someone involved in minimal activities, e.g. playing cards, watching TV, reading, driving, lab work, typing, cooking.	1.3 (men) 1.3 (women)
Light	Has some physical activity, but not high impact. Most professionals (doctors, teachers, students, etc.) would fall under this category, e.g. walking, laundry, golf, ping pong.	1.6 (men) 1.5 (women)
Moderate	You may have to average 1.5 to 2 hours of exercise per day, e.g. jogging 5 to 6 miles/day, cycling, skiing, tennis, dancing.	1.7 (men) 1.6 (women)
Heavy	This level requires moderate intensity activity for most of the work day or exercise comparable to running 9 to 13 miles/day, basketball, climbing, football, soccer.	2.1 (men) 1.9 (women)
Exceptional	Moderate to high level of physical activity for most of the work day or exercise comparable to running 14 to 17 miles/day.	2.4 (men) 2.2 (women)

\*Adapted from source: Whitney, E., & Rolfes, S. (2002). *Understanding Nutrition*. (Ninth Edition). USA: Wadsworth Group.

3. Use a range versus one singular number (i.e. multiple 1.3-1.5)

# Calorie Calculation Example:



Jane is a 28 year old generally healthy female. She has a history of trying fad diets and is looking to ditch the diet and determine how many calories her body actually needs each day.

She is 5'3", 145 pounds, and exercises 2-3 times a week riding a Peloton for 30-45 minutes. Otherwise her job/life is pretty sedentary.

Her BMR is about 1520 calories. Therefore she should NEVER consume less than this. Her activity factor is 1.2-1.3 therefore her calorie range to maintain her current weight is:

$$1520 \times 1.2 = 1820 \text{ kcal}$$

$$1520 \times 1.3 = 1980 \text{ kcal}$$

**Total Calories per day: 1820-1980**

# But What if the Goal is Weight Loss?....

Although I feel it's important for women to understand that weight does not equal worth ( and p.s. owning a scale is often more toxic than helpful), I also respect and honor those that have a goal to lose weight. Especially if they are seeking professional help from a dietitian and want to do it in a sustainable healthy way.

First and foremost, weight loss is COMPLICATED. It would be so simple if it worked like the formulas estimate. For instance, decrease "x" amount of calories for "x" amount of weeks and will lose "x" amount of pounds.

Well, it sadly does not work like that. Remember all the factors that impact BMR? Well all of those also impact our abilities to manipulate weight.

As I mentioned prior, DO NOT consume below BMR. A good starting place would be to aim for a few hundred calories ABOVE this number, as well as increase physical activity .

For more personalized recommendations on calories, macros, and more.. book a consultation with me or join one of my group programs!

# Now it's Your Turn!

Age: \_\_\_\_\_

Height: \_\_\_\_\_

Weight: \_\_\_\_\_

BMR (refer to page 3): \_\_\_\_\_ calories

Activity Factor (refer to page 5): \_\_\_\_\_

use a range for example 1.3-1.4

Now multiple your BMR x Activity Factor:

\_\_\_\_\_ = \_\_\_\_\_

remember to estimate and use a range (i.e. 1800-2000 kcal)

For weight loss, use a number still ABOVE your BMR, and most importantly go by how you FEEL. Increased energy, improved mood, regular menstrual cycle, and normal hunger levels (not starving or overly full) are signs you are eating an adequate amount!

# ”Are you Fueling Properly?” Quiz

There are no right or wrong answers; simply respond as you see fit and see what you discover about yourself.

- Score 2 points for each 'Yes', 1 point for each 'S / Sometimes' and 0 point for 'No'.
- >8 = healthy AF, 4-7 = room for improvement, <4 = time to improve your health!

	Yes	S	No
1. I am rarely super hungry or super full	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I eat a large variety of foods every day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I eat well nutritionally most of the time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I have plenty of sleep and feel well-rested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I easily manage my mental health/stress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I do not restrict certain foods or food groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I feel energized most days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I do not struggle with managing my weight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I rarely feel out of control with foods/binge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Your total score \_\_\_\_\_

What did you learn about yourself?

WANT MORE?

# Join Our Individual or Group Nutrition Programs!



Danielle offers individual and group programs depending on your nutritional wants and needs.

She specializes in women's nutrition, sports nutrition, and brides-to-be.

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